OCTOBER • 1960

FIREMEN

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Unsprinklered Mercantile Ruined by Fire—*see page 7*

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65th year

CLOSED CHEST CARDIAC MASSAGE - *page 8*

OPERATION SEASIDE - - - - - - - - - - *page 12*

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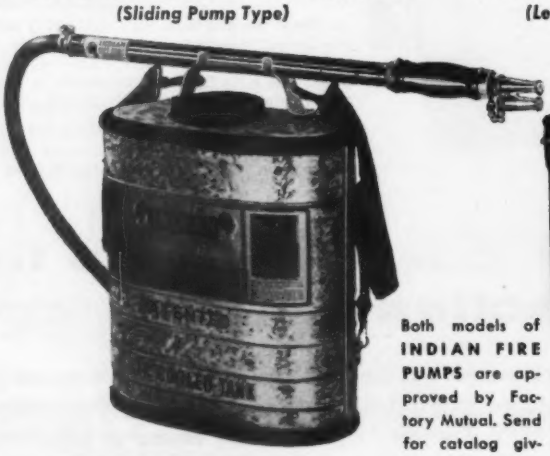

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FIREMEN

Volume 27 Number 10

A monthly magazine published for the fire service members of the National Fire Protection Association, 60 Batterymarch Street, Boston 10, Massachusetts.

Although fire caused an estimated million dollar loss to the East Brunswick, New Jersey, mercantile building shown on this month's cover and led to smoke and water damage in adjacent structures, fire walls extending above the building played an important role in limiting spread in the 22-store modern shopping center. Good use of hand lines and heavy streams by responding fire departments also were important in protecting exposures.

The fire was discovered by a passer-by near midnight on September 3. The store had been closed for nearly six hours and no watchman service, sprinklers or automatic detection equipment were provided for the building. Police patrolling the area about 10 o'clock had found nothing wrong. However, when first responding companies arrived from East Brunswick Independent Fire Company No. 1, a small fire was under way in the north end of the store near electrical equipment for the air conditioning system. It was soon obvious that the fire had good headway above a suspended ceiling and through air conditioning ducts. Under the direction of Assistant Chief Louis A. Force, a 2½-inch line and two 1½-inch lines were laid immediately and volunteers tried to open up the roof while others made inside attack wearing self-contained breathing apparatus. Outside aid was requested from three neighboring fire departments. In a short time, however, fire fighters were forced from the building and off the roof as the fire broke through the ceiling and out roof ventilators. Streams from a ladder pipe, portable monitors, and about twenty additional hand lines were brought into use at the front and rear of the building and from adjacent roofs as five additional departments came in on a prearranged mutual aid plan. Despite this attack, however, the fire fully involved the undivided interior of the building and about an hour and a half after the first alarm the roof collapsed. The entire shopping center and a nearby bowling alley were seriously threatened. Fire walls between the involved building and adjoining stores helped to confine the fire, but a low parapet on one side permitted fire spread to the roof of one store. (*As pointed out in NFPA standards, fire-resistive fire walls three feet high provide substantial protection against fire spread, although some building codes permit fire walls of lesser height. — Ed.*) Fire fighters stopped this extension quickly with hose streams, but some damage was caused to this exposed building.

About five hours after the fire was discovered, mutual aid companies began picking up, but the East Brunswick members were on the scene until late afternoon. (*Cover picture by William C. Peck.*)

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Christmas is only about two months away, and it is not too early to think about the fire hazards of that season. Just released is a report of the NFPA Fire Record Department which points out that last year the number of Christmas tree and decoration fires was the highest of any year since 1953. The annual study of this particular type of fire showed that approximately 1,020 Christmas tree and decoration fires occurred in the U. S. in 1959, causing a loss of approximately $997,500 or an average of $979 per fire. These statistics were calculated from the reports of 527 U. S. cities.

The figures showed an increase of 56.9% in the number of Christmas tree and decoration fires and a 55.4% increase in the losses over the previous year. There is no apparent reason for this increase. However, in the five years preceding 1959, the number of Christmas tree fire incidents declined considerably, reflecting public awareness of the Christmas tree fire hazard and the carrying out of good fire prevention practices.

The sharp increase of last year proves once again that the public needs a strong reminder of sensible fire prevention messages just before the holiday season. The following table shows the number of Christmas tree and decoration fires per year for the last ten years.

1950 — 1,200	1955 — 900
1951 — 1,200	1956 — 800
1952 — 1,000	1957 — 700
1953 — 1,150	1958 — 650 — $642,000
1954 — 750	1959 — 1,020 — $997,500

Warren Y. Kimball, Managing Editor; Paul R. Lyons, Editor; Henry S. Gere, Advertising Manager; Rowena D. Dores, Editorial Assistant; Shirley Tobey, Fire Service Department; Virginia Stiles, Advertising Department.

CLOSED CHEST CARDIAC RESUSCITATION —

Another EMERGENCY METHOD OF RESUSCITATION

by Captain Martin C. McMahon,
Supervisor of Ambulance Service,
Baltimore, Maryland, Fire Department

Fire Fighter Hubert Cheek of Baltimore's Ambulance No. 2 shows technique he used successfully on a victim four days after he received the training. At his right is Dr. Kouwenhoven. Guy Knickerbocker is at Cheek's left.

NOTICE — This is a brand new technique and many medical personnel may not, as yet, have had the chance to study its application and benefits. Consequently, fire departments should consult with doctors before adopting the technique for training and standard practice.

MEMBERS of the ambulance crews of the Baltimore Fire Department recently have been applying a new technique on victims of cardiac arrest or standstill. Called "closed chest cardiac resuscitation," the technique is combined with mouth-to-mouth or mouth-to-airway artificial respiration as an emergency measure for cardiac arrest victims when no medical assistance is immediately available. The cessation of all circulation is recognized by absent respirations, cyanosis, absence of the pulses in the wrist and groin, and the absence of a heartbeat. The method is simple to understand and easy to perform and is shown in illustrations on these pages. If performed correctly, it may produce a palpable pulse and sufficient circulation to keep the brain alive and maintain the tone of the heart until medical assistance is obtained.

The victim when found should be placed on a hard surface such as a floor or sidewalk (a soft surface beneath him, such as a mattress, does not offer sufficient resistance for compression of the heart). The rescuer places the heel of one hand on the sternum, or breastbone, about two inches from the lower end. The palm of the other hand is placed on top of the first hand. Pressure is now exerted downward, compressing the heart between the breastbone and the spinal column. The largest part of the heart lies directly under the sternum, and the bones of the ribs, attached to the sternum by means of cartilage, are relaxed and flexible enough to allow compression of the chest. The heart is a valve-like chamber which allows blood to move in the correct direction when pumping, and the blood in the heart is squeezed out when external pressure is applied to the chest.

The correct pressure will vary according to the size of the rescuer and his victim and can be determined readily by the rescuer. The pupils of the eyes of a victim of cardiac arrest or standstill will dilate, but if an adequate amount of blood is being moved, the pupils will start to contract. The rescuer should apply his pressure at a rate of between 60 and 80 times per minute, approximately in the range of the natural beat of the heart. The technique should be continued where the victim is found and on the litter of an ambulance until it reaches the hospital.

If possible, the hospital should be alerted beforehand as to the nature of the case and informed of what techniques are being applied. In Baltimore, ambulance crew members call fire department headquarters by radio, and then headquarters alerts the hospital emergency room by telephone.

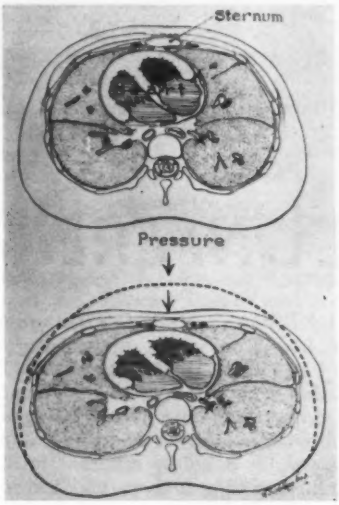
When such a victim is brought into the Johns Hopkins Hospital, doctors use an electrocardiograph and an external defibrillator in attempting resuscitation.

In April, 1960, Captain McMahon was invited to a demonstration of the closed chest cardiac massage technique at the Johns Hopkins Hospital. (*Ed note. Readers of* FIREMEN *magazine will recall that Captain McMahon worked with Dr. Peter Safar in developing the airway used in mouth-to-airway artificial respiration. See* FIREMEN *for December, 1958.*) When he saw the demonstration, the Captain asked for instructions for the ambulance crews in the Baltimore City Fire Department. Three classes were scheduled immediately and 105 persons attended. Four days after the first class had been trained, two members of Ambulance Crew No. 2 used the technique on a sixty-year-old man who was found unconscious, cyanotic, nonbreathing and pulseless. As they had been trained, fire fighters Hubert Cheek and Marvin Burkendine removed the victim from his bed to the floor. One man started the closed chest cardiac massage and the other started mouth-to-airway artificial respiration. Shortly afterwards, the victim's pulse was beating, and within five minutes he was gasping. He was then lifted to an ambulance litter and taken to the Johns Hopkins Hospital, with oxygen being administered on the run. Hospital personnel took over the task and the victim was successfully revived.

Dr. William B. Kouwenhoven, of Johns Hopkins University, Lecturer in Surgery at the hospital, is principally responsible for the closed chest cardiac massage technique. He is also chiefly responsible for the invention of the "external defibrillator" used by the

hospital to supplement the work of ambulance crews. Additional work was done in the Department of Surgery under the direction of Dr. Alfred Blalock, widely known for his Blue Baby operations. Dr. James Jude, working in the laboratory with Guy Knickerbocker, both from the Hopkins School of Medicine, is responsible for the clinical application of the method.

In general, here is why closed chest cardiac massage is necessary and why it is helpful: muscle fibers of the main pumping chambers of the heart, known as the



Top sketch shows chest, sternum, ribs, and spinal column. Bottom sketch shows how applied pressure squeezes heart and effects movement of blood.

left and right ventricles, may stop their contractile activity altogether. This condition, known as cardiac standstill, can occur for many reasons related to the control of the delicate balance of chemical salts and nutrients which supply food to the heart muscle. Cardiac standstill arises frequently when, for various reasons, the patient is unable to breathe and supply blood-borne oxygen to the heart. Other disease states can alter the chemical balance. Cardiac arrest is quite often treated successfully by supplying properly nourished blood to the heart, and closed chest cardiac massage seems to fill this requirement.

When the regular, rhythmic pumping of blood by the heart is upset, the fibers of the heart, instead of beating in unison, may be disturbed. The millions of fibers may continue contracting but in a random fashion, so that there is no coordination and no blood is moved. This is called "ventricular fibrillation." When ventricular fibrillation occurs, the pulse disappears and the heart stops pumping blood. The victim usually gasps for breath for a brief time before the lack of oxygen stops respiratory center activity. He can then die from anoxia (a lack of oxygen supply to living tissues) unless some way can be found to supply oxygen, such as through mouth-to-mouth or mouth-to-airway artificial respiration and circulation.

Therefore, when either ventricular fibrillation or paralysis of respiration occurs, the victim will have stopped breathing, and circulation of his blood will have ceased. The application of mouth-to-mouth or mouth-to-airway artificial respiration combined with the closed chest cardiac massage is an emergency measure which

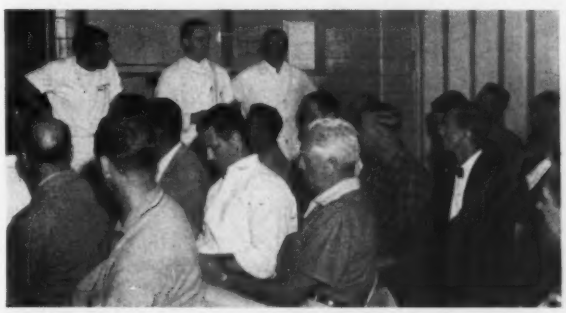
Sketch of victim with airway in position shows outline of chest cavity and position of rescuer's hands.

may help the lay rescuer to keep the victim alive until medical or hospital help can be obtained.

The external defibrillator developed by Dr. Kouwenhoven is designed to send sufficient electric current through the heart to contract it and bring its twitching fibers to rest. An alternating current of 5 amperes, at 440 volts is sent through the victim's chest for ¼ of a second. This is done by means of electrodes, about three inches in diameter, placed firmly on the chest, one at the top of the breastbone, the other at about one inch below the left nipple. However, since it takes time for the hospital to set up this equipment for a victim, the closed chest cardiac massage must be continued. It has been done successfully for as long as 105 minutes at the Johns Hopkins Hospital.

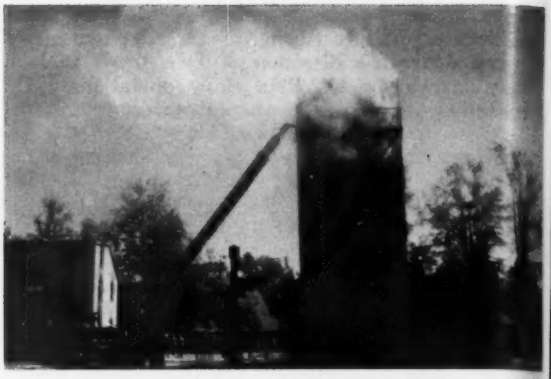
In the field, if the massage is to be continued for long periods of time, it is recommended that operators alternate at least every five minutes. As this article is being prepared, closed chest cardiac massage has been used on 56 cases of cardiac arrest at the Johns Hopkins Hospital and has proven successful in 44 of these cases. Dr. Jude has used this technique successfully on persons ranging in age from 2 months to 82 years.

The closed chest cardiac massage technique was reported in the July 9, 1960, issue of the *Journal of the American Medical Association*. In the introduction of the article, this editorial comment was made: ". . . The use of this technique on twenty patients has given an over-all permanent survival rate of 70%. Anyone, anywhere, can now initiate cardiac resuscitative procedures. All that is needed are two hands."



Guy Knickerbocker, Dr. James Jude and Dr. William Kouwenhoven lecture on method of closed chest cardiac massage for members of the Baltimore Fire Department.

Portion of the crowd gathered at the training grounds of Rochester's Fire Academy as the three-hour program of demonstrations began.



Hydraulically operated ladder pipe was raised to quench Class A fire in top floor of the drill tower. Hand lines were used in interior attack.

ACTION AT CHIEFS' CONFERENCE

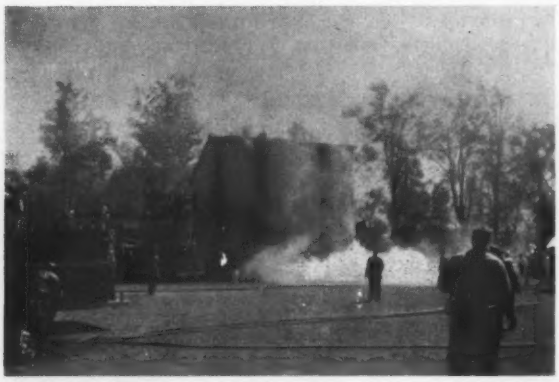
Running oil fire on this transformer was put out by automatic sprinklers. Underground and aboveground natural gas fires in the training ground's fixed installations were also extinguished.

ON WEDNESDAY afternoon, September 14, during the 87th Conference of the International Association of Fire Chiefs, the Rochester Fire Bureau presented a number of well-coordinated demonstrations. In the first hour fire fighters from Rochester and from volunteer fire companies in Monroe County showed their techniques for handling different fires in the drill tower, training building and oil and gas installations. During the next two hours, some of the 108 exhibitors at the Conference showed the use of their products on other fires.

The demonstrations, with Deputy Chief Clifford J. McMillan, training officer of the Fire Bureau as master of ceremonies, attracted most of the 2,300 IAFC members and guests attending the Conference.

IAFC officers elected during the Conference include: Chief William J. Taylor, Burbank, California, president; Chief Edward F. Deignan, Elizabeth, New Jersey, first vice president; Chief Lewis A. Marshall, Providence, Rhode Island, second vice president; Chief G. A. Mitchell, Opelika, Alabama, treasurer, and B. Richter Townsend, Albany, New York, executive director.

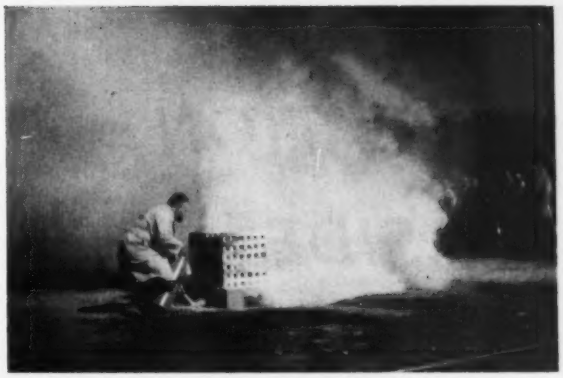
The 88th IAFC Conference is scheduled to be held in Las Vegas, Nevada, September 25–28, 1961.



Volunteer fire companies were called in on simulated mutual aid operation to extinguish this fire in training building. "Indirect attack" with water fog was used. Note steam formation as fog takes effect.

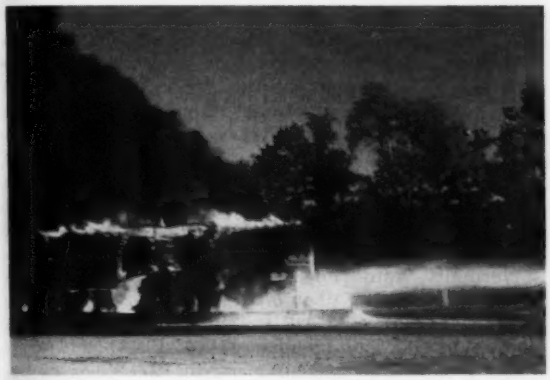
Magnesium chips and turnings were ignited, then hit with solid stream to show effect of water on this burning metal. Brilliant flame and explosions resulted each time stream hit molten metal.

A combination nozzle of Rockwood Sprinkler Company directed water fog, straight stream and foam on flammable liquid spill fire.



New "ABC" extinguisher of Alim Corporation was used on fires in wooden crib, rubber tires, and magnesium chips.

Pitman "Snorkel" recently purchased by Memphis, Tennessee, Fire Department was demonstrated at the drill tower as rescue device and water tower.



Foam trailer of Akron Brass Manufacturing Company combined with a pumper supplied good stream of wet water foam to extinguish running gasoline fire on this tank car.

The "Little Mo" truck of American LaFrance Corporation was driven around tank severely involved in flammable liquids fire. Foam from turret nozzle operated by driver spread effective blanket quickly. Small hand line wiped out remaining fire.

OPERATION SEASIDE

A report of interesting training and fire-fighting activities by Chief Fire Officer Howard F. Griffiths, Suffolk and Ipswich Fire Service, Ipswich, England.

Equipment loaded and ready for take-off.

THIS article has been written in the hope that a piece of operational improvisation recently developed in the "old country" may be of some interest to readers of FIREMEN magazine. The Brigade for which I am responsible covers an area of 1,500 square miles with a population of 470,000 chiefly centered around the ports of Ipswich and Lowestoft. We have all the usual risks along with substantial tracts of forest and a number of United States Air Force bases, each equivalent to a fair-sized township. Additionally, we have a 70-mile coastline as well as a number of tidal estuaries.

A wide variety of vessels ply up and down our shore ranging from small coasters of a few hundred tons up to passenger ships with a thousand berths, and from modern trawlers which may be worth a million dollars up to medium-sized oil tankers. It is inevitable that we should receive a small but regular number of calls to ships which are either on fire or making water, and the question arises as to what we should do about these calls, bearing in mind that we have no port within the Brigade sufficiently busy to justify the heavy expense of a fire boat. There is a point that our legal responsibility for fire fighting ceases at the low water mark, but it has long been the custom in this country to place all possible aid at the disposal of a vessel in distress and to leave the legal niceties to be sorted out by lawyers at a later date.

Until recently, we had no alternative but to instruct the ship's master by radio to go to the nearest port where we would arrange to have fire engines and firemen awaiting him. We were never too happy about that, however, as a ship on fire is not a welcome guest at any port and there was sometimes difficulty in finding a berth that was acceptable to all parties. Moreover, it has to be remembered that a vessel may not be capable of making port. This was the case with the little motor vessel "Staniel." She was filled with tightly baled straw from keel to bridge level when the fire broke out four miles off our coast. We asked her by radio to put in to the nearest port, which was Ipswich, but, on that course, the wind was taking the smoke and heat straight across the bridge, and the skipper had to go about and make for the more distant port of Lowestoft.

Four miles short of his objective, conditions on the bridge became impossible, and he was obliged to beach the vessel where we tackled the fire after lowering pumps down a cliff and hauling them across a shingle beach. This is just one example taken from last year's record, and we were very conscious of the fact that if we could have found some means of getting out to that vessel while she was still at sea, we could have brought the fire under control in its early stages and saved what, I regret to report, ultimately became a total loss.

Since that time we have concluded arrangements with the Royal Air Force at their Air Sea Rescue Bases which, fortunately, lie at the extreme southern and northern ends of this Brigade's area. Under this arrangement, the R.A.F. will convey us by helicopter to any ship in distress off the coast and lower us, complete with light equipment, on to the deck.

The type of helicopter is the Sikorsky 55 which has an all up weight of about 3½ tons and a single 550 horsepower engine giving a maximum speed in the neighborhood of 110 m.p.h. It can remain in the air for some hours but its operational range cannot be quoted with certainty as it varies between wide limits according to the weather and according to the amount of petrol which the pilot decides to take on board. This is a matter for careful calculation as the more petrol with which the machine is burdened, the less useful load it can carry.

Normally, admittance to the aircraft is through a horizontally sliding door on the starboard side of the fuselage, and I would call special attention to the fact that, over the door opening, there is an electro-magnetically operated hydraulic winch, the business end of which takes the form of a snap hook on the end of a steel hawser. It is the availability of this winch by means of which men and equipment can be lowered that makes this type of aircraft particularly suitable for our needs.

The full crew comprises a pilot sitting alongside an observer in a forward position aloft, and a winch man who sits in the main body of the aircraft. Owing to the fact that the winch man works with the door wide open and with the aircraft in flight, he normally takes the precaution of donning a belt which is secured by a long strap to a "railway" running the whole length of the roof. The winch man is in charge of the loading or unloading of the machine and is able to pass his requests for the movement of the aircraft to the pilot over the intercom. The crew can be reduced to two by dispensing with the observer when it is desired to save all possible weight.

The first job of the helicopter upon receipt of a fire call is to make a reconnaissance. This pin-points the

Officer winching down. He will be followed by a fireman.

Lowering the portable pump.

exact position of the vessel and enables information to be sent back as to the state of the fire and whether assistance is required. If assistance is, in fact, required, a helicopter lands at a pre-arranged spot where the Fire Service will be waiting to load men and equipment on board.

Space and weight limitations have to be carefully watched so that the number of personnel with the first attendance amounts only to one officer and one fireman. The equipment consists of a high efficiency portable pump weighing 300 lbs. and capable of putting out four ¾-inch jets at fire-fighting pressure, three 10-foot lengths of suction hose and a rectangular wooden box containing hose, branchpipes and a variety of other pieces, including foam generators if necessary.

The noise level in a piston-engined helicopter has to be experienced to be believed, and those who have suffered it will recall that conversation is impossible once the take-off has been made. Regular drills are therefore vital if each person is going to understand exactly what his job is without further instruction.

Upon arrival at the burning vessel, the pilot hovers his machine over any convenient piece of open deck, and the skill of these people is such that they can accurately drop you on to a pocket handkerchief. Five separate drops with the winch are now necessary — the first with the officer, the second with the fireman, the third with the pump, the fourth with the equipment box and the fifth with the suction hose. By drawing water from the sea and with a little unskilled aid from the vessel's crew, the firemen are now in a position to bring four powerful jets into operation within a very few minutes.

At this stage, Fire Control will be anxious to have information as to the nature of the fire and whether any further flights with men and equipment are thought to be necessary. Fortunately, therefore, the line of communication for this message passing is excellent. Fire Control keeps a telephone line open to Flying Control which is in radio contact with the pilot of the helicopter. The fire officer wears a life jacket, known as "Sarah," in which is incorporated a small radio operating on one of the ten frequencies available in the helicopter, so the fire officer can talk with the helicopter pilot.

With only two exceptions, normal fire-fighting equipment is used throughout. The usual fireman's helmet has not been found suitable, and it has become the custom to wear the miner's type of helmet on these operations. The standard type of portable pump is quite suitable, except that experience has taught us to mount it on skids separated from the frame-work by springs designed to absorb landing shock. Axes should be left behind, and low shoes are better than fire boots for a man who is running a certain amount of risk of falling into deep water. On a ship fire of any duration, walkie-talkie apparatus would be flown out and would be worked in conjunction with other sets on the beach close to a fire car.

Fire fighting is rarely without its snags, and helicopter fire fighting is no exception. Our negotiations with the R.A.F. soon revealed the fact that helicopters cannot fly after dark. We were thus faced with the problem of having a "daylight only service," but I made an approach to the Royal National Lifeboat Institution which is responsible for all lifeboats in the United Kingdom. Officials readily agreed that we could call the three craft stationed along the coast.

We are now running a series of three-cornered exercises in the North Sea using the Fire Service, the Royal Air Force and the Lifeboats, and can hardly wait for the next ship fire. When it comes along, I hope it is daylight, as I have a very peculiar stomach; it does not mind in the least dangling from the bottom of a helicopter doing a hundred miles an hour over the waves, but a few minutes of tossing about in a small boat, and it is inclined to react most unpleasantly.

A few minutes later and four jets are at work.

RESTORING FIRE COMPANY MORALE

Much depends on alertness and leadership of fire company officers.

AN EXAMINATION question sometimes given to fire officers is: "How would you restore good morale in a fire company that was suffering from "poor morale?" The cause of the poor morale is not stated and the officer answering the examination question has the difficult task of determining the cause or causes and applying the remedy.

Admittedly, "poor morale" is a generic if not vague term for a group attitude or reaction that is difficult to define. Most people are against "sin" but not all agree what "sin" is. Some might construe good morale to mean enthusiastic acceptance of all that is embraced in official fire department policy and accepted tradition. The danger here is that perhaps some policies might be improved, and cherished traditional ways may not always be so worthy that they justify no change.

Fire department morale problems may be placed in two groups. First, there are the factors or conditions that prevail throughout the whole department, such as hours of work, pay and related matters. There is relatively little that the company officer can do to change general departmental conditions which make men dissatisfied and lead to poor morale.

A second facet, however, concerns the conditions in the fire company and fire station. It is in this area that the company officer can make the greatest contribution to the "esprit de corps" or morale of his outfit. He can have the sort of outfit in which men like to work.

Admittedly, morale is a matter of human relations and much has been written on this subject. All of the virtues that a fire officer should possess have often been enumerated until one begins to suspect that "there ain't no such animal, at least not in the human race." We recall that one fire department had a lecture on "qualities of leadership." The general reaction of the men was, "Our chief does not have many of those qualities; in fact, he is pretty much the opposite but still he's the chief."

One fire department philosopher observed, "If the fire truck doesn't work right you can take it apart. If it is not correctly assembled the job can be done over and the machine will run right. But you can't take the fire fighters apart and have the same relationship, friendship and attitude that existed before. You may not have a second chance if you don't handle human beings in what they think is a fair and reasonable way. Men have memories."

When called upon to deal with poor morale in a fire company, it is necessary to attempt to determine the cause or causes of trouble. Perhaps the best clue is the character of the former officer who let the undesirable condition develop. Was he so lax, lazy, or indifferent that there was no leadership and the spirit of company unity and teamwork fell apart? Did he play factions and favorites and seek to "rule by division?" Was he a "martinet" who was concerned with the letter rather than the spirit of the rules and regulations and wanted everyone to be aware "who wears the bugles around here?"

The newly assigned officer has a great initial advantage. He starts fresh with no "pets" or factions. He has not yet made mistakes which have alienated his crew. Most fire fighters will be willing to give him a chance to prove himself. They hope that he realizes that the whole crew has a job to do and that it can be done with as little fuss and visible direction as possible. The steering wheel and rudder are not a big or spectacular part of a ship but quietly determine the direction the vessel will go. Thus, with a fire company, good morale largely rests in the personal qualities of the officer. In the first place he must be respected as a man and not just because of his appointed or assigned rank. It has been stated that in primitive societies a tribal leader is chief only as long as he *is* chief. When he loses the confidence and respect of the tribe, a new chief is found. In civilized society things are more complicated. Men are selected and appointed to lead through a process of government, be it "civil service" or otherwise, but still beneath all the gold or silver braid is the man selected to lead. One fire fighter chided for not showing proper respect for high rank stated: "I have respect for the bars of a lieutenant but not when pinned on a jackass."

Secondly, to be an effective officer and inspire good morale, the man must be recognized as an efficient and competent fire fighter. There is no substitute for this qualification if an officer is to have a proper, spirited company. The officer should be rather modest about this, but his natural attitude toward the fire fighting job must be confident and inspire the acceptance of his leadership. It has been said that "Men like to belong to a winning ball club," but leadership in the fire service is more than this. There are few organizations in which men are more closely knit than in a fire fighting crew and it should be a pleasure for them to work together under a competent officer. The good officer on his part recognizes the abilities and qualifications of each member and gives credit to all hands for a day's work well done.

One area in which some officers fail in maintaining morale is that they encourage or permit excessive dissent against official policies from headquarters. A good fire company and fire officer will try to work things out in line with official policy and to accept and make the best of situations which they do not have power to correct immediately. There may be many details of local fire department operations with which individual officers and men have reason to disagree, but a good fire company is a reasonably happy, smooth-running team despite various handicaps. One good fire officer quoted this prayer: "Lord, let me change things that I can change; accept the things I cannot change; and have wisdom to know the difference between them."

Now, assuming that the officer himself has the necessary qualifications for leadership and has the backing of his own superiors, we can begin to consider some of the required steps for smoothing out the rough spots that have led to an inefficient or low-morale outfit. One of the chief sources of trouble is personal animosity or divisions among the membership. Usually, these have been allowed to develop by a previous officer and a new or fair deal with equal treatment for all will

(*Continued on page 23*)

A 58 degree angle is critical in setting the ladder in right position. Free swinging pendulum shows a ready method for determining the angle by sight as well as by touch. (*Photos by the Glynn Times*)

Victim's legs (Chief Harrison) are placed over the shoulders of the rescuer (Joe Hefter), and the body is secured between the side rails of the ladder.

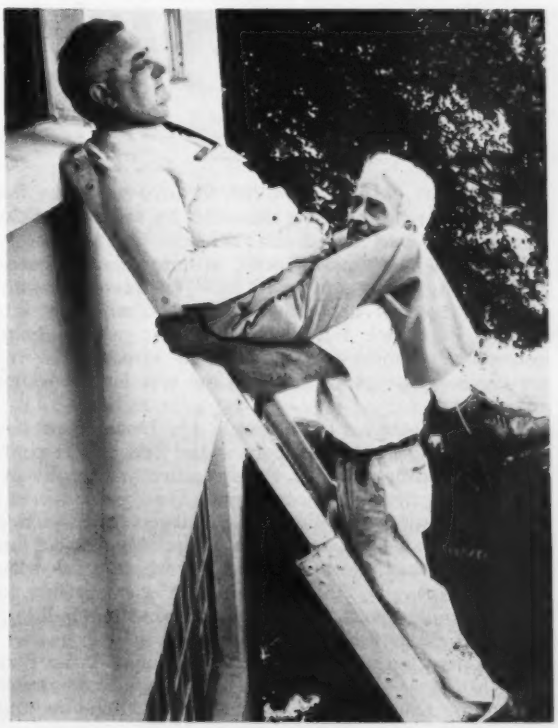
LADDER RESCUE FOR HEAVY PERSONS

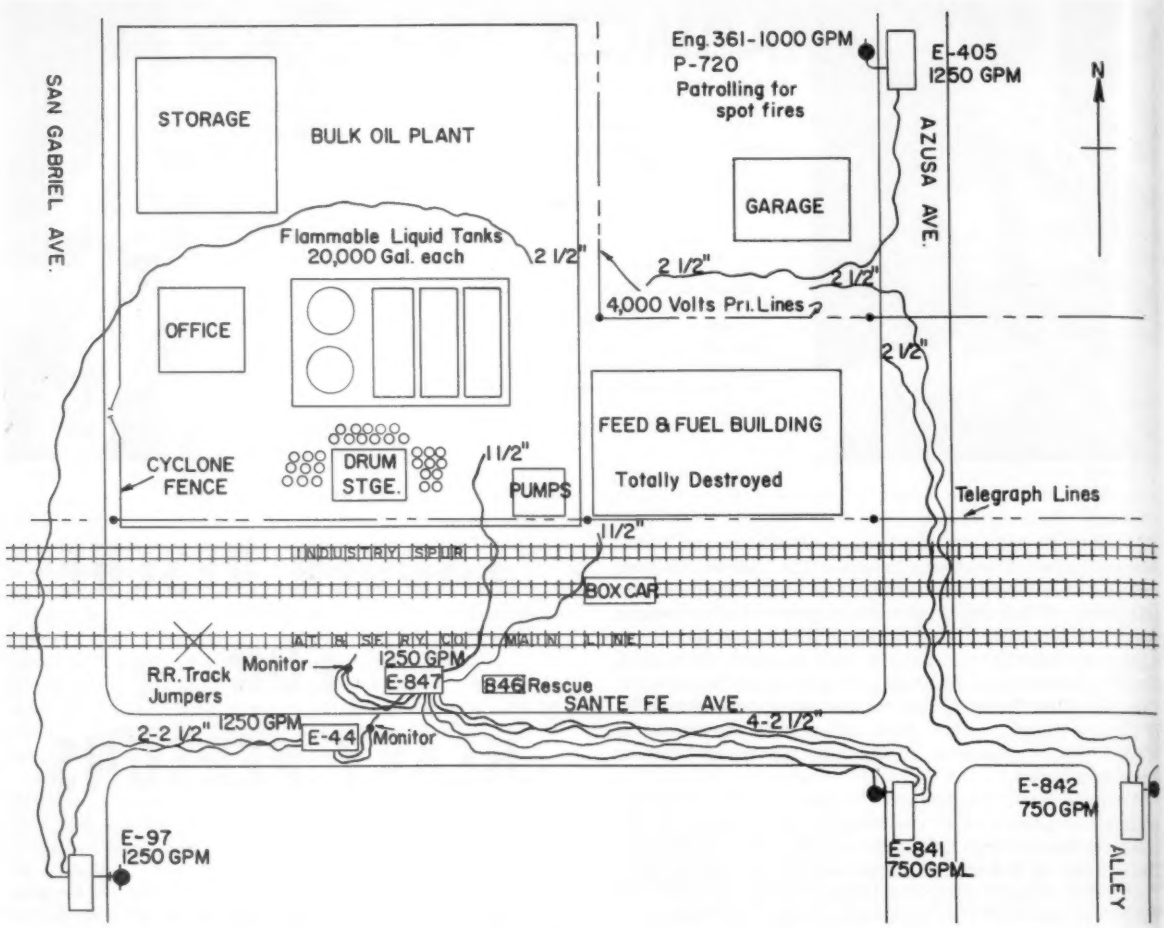
CHIEF J. Kenneth Harrison, who commands the Volunteer Fire Department of St. Simons Island, Georgia, furnished the interesting pictures shown on this page. They show the technique of ladder rescue developed by Chief Harrison and the members of his department for heavy or for injured persons. For years, Chief Harrison, former assistant chief of the Brunswick, Georgia, Fire Department, worked on the development of this technique, which gives the rescuer good control of the victim and also allows him full control of his arms and legs.

An important requirement of this system of rescue is that the ladder must be raised at an angle of 58 degrees to the ground level. If the rescuer should slip, the weight of the victim's legs will draw him back to the ladder. The angle of the ladder throws the victim's head forward and the operator's hands are in such a position that they can guard the victim at all times. As shown on this page, even a small man can handle a heavy victim with this technique. Too shallow an angle will not allow the victim to slide down easily. Too sharp an angle throws the victim's weight on the rescuer's shoulders.

The comparative weights of Chief Harrison and Joe Hefter are 250 pounds to 125 pounds. Joe says the weight of his "victim" seems, on the ladder, to be about forty pounds.

Victim and rescuer are in position with the ladder supporting the victim's weight. Ladder angle also allows victim's head to fall forward.





PLANNING PAYS!

From a report by M. S. Chenard, Chief in charge of Fire Prevention, Azusa, California.

On Sunday, March 27, 1960, at 5:20 P.M., our fire department received a transmission by radio from the Azusa police that a feed and fuel store was on fire.

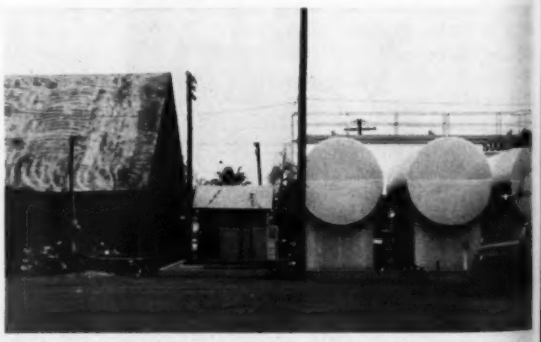
Since this very old wooden structure was located immediately adjacent to a bulk oil plant, pre-fire planning by our department included not only our method of attack but also calling for outside help, immediately, under our mutual aid agreement. We are pleased to report that no time was lost in either operation.

The fire station is located only 1½ blocks from the location of the fire. Members of the first engine company responding saw that the structure was totally involved. As they went into action, two preconnected 1½-inch lines were applied to the tanks at the Standard Oil bulk plant. These lines were quickly backed up by four 2½-inch lines and two monitor nozzles with 1½-inch tips. By this procedure it was possible to keep the tanks cool and confine the fire to one building with final extinguishment.

The operation was under the direction of Azusa Fire Chief Marlowe Madison. Mutual aid engine companies responding from Covina, West Covina, Glendora and Los Angeles County were assigned to laying hose lines, covering exposures, manning a fire station and patrolling surrounding areas for spot fires.

Special jumpers carried on the first responding Azusa engine company shunted the railroad tracks of the main line of the Atchison, Topeka & Santa Fe Railroad to set the signals and prevent trains from coming through this hazardous area.

The loss to the building and contents was only $15,000 but the hazardous situation that was present was cause for concern. Arson investigation was conducted, but all indications were that this fire was started by defective electrical wiring or appliances.



Despite close exposure of tanks to building, good use of hose streams prevented fire spread.

Making a Good Job of it

by Warren Y. Kimball, Managing Editor, FIREMEN Magazine, and Manager, NFPA Fire Service Department.

What to Do About TRANSFERS

ONE of the sore subjects in fire department administration is the matter of "transfers" or assignment of members to different stations from those in which they have been serving. This problem may exist in any department manning more than a single fire station.

Obviously, there are two aspects or points of view regarding transfers of personnel to new assignments. One is the administrative or headquarters' necessity for providing the required manpower for each station and the other is the feeling of the men affected by changes in assignment.

Administrative Point of View

From the headquarters' point of view, it is essential to provide experienced officers and fire fighters for all districts protected. This includes high-value companies protecting business and industry as well as fire companies in residential areas. Of necessity, all members cannot live near their homes. Also, it is seldom good practice to have a disproportionate number of older members in one station and newer men in another. Transfers become necessary to fill vacancies created by promotions or retirements. Some departments have a policy of requiring men to have both engine and truck company experience before becoming officers. This may require transfers. Obviously, the work load may vary greatly between different fire stations. Members assigned to one station may do twice the fire duty as members in another "house" of the same department. To maintain company efficiency it may be necessary to move men from time to time. One fire chief countered an objection to a transfer from a residential district to a downtown station with the following reply: "This young man has ability and is a potential officer. He has had little fire-fighting experience at his former station. It would be unfair to him not to provide him an equal opportunity with other members for obtaining necessary experience."

While a man belongs to a particular fire department and may be subject to assignment at any station for which he is qualified, the individual fire fighter takes considerable pride in belonging to a particular company. The fire "house" is like a second home. The man has a recognized individual place in the scheme of things. He may have certain seniority rights that are important. He tends to resent a sudden arbitrary transfer which he has not requested. The point of view of many fire fighters is pretty well represented by the following excerpt from an item in "The Newsletter" of the City Fire Fighters' Association of Philadelphia (IAFF Local 22) written by vice president Ernest Greiner, "a working fireman for 20 years."

Firemen's Point of View

"Perhaps the greatest inefficiency of wholesale transfers is the fact that they break up teams of experienced workers. You know that it takes about two months for a fireman to learn how to work with a new set of men. They must learn what to expect from him, and he must learn their reactions to various situations. It takes even longer than two months to become familiar with a new district.

"A second reason why wholesale transfers are inefficient is that, when a man is shifted without previous knowledge, he has a natural feeling of resentment. It suggests to him that he may have been unwanted or incapable of carrying his end in the company in which he was working. This is especially true in the pointless transfers of men from ladders to engines, or from either to rescue squads or fireboats. In each case the man has developed special skills in his field. His value is greater in the job he knows best. And, anyone will agree, the best way to know a job is to work at it.

"A third reason why wholesale transfers are inefficient is based on simple geography. A man who suddenly is forced to travel from his home at one end of the city to his station at the other naturally is unhappy. Especially when there is no sensible reason for the shift. By using a little thought in transfers the Fire Department could promote both efficiency and morale. It would not be difficult to work out plans whereby men could be reasonably near their homes. And certainly this would make the men happier and healthier in their relation to their jobs, which obviously would promote efficiency.

"To state that no men should be transferred would be silly. Local 22 never has suggested this, and never would. Men must gain a measure of all-around experience. Too, there are occasional situations in which transfers are advisable, or even requested by the men.

"But these shifts never should exceed five per cent of the personnel. And they should be made with careful thought, first to the welfare of the men, and second to the efficiency of the operation of the Fire Department."

The Need for Transfers

There may be some question whether it will always be administratively possible to limit changes in assignment to 5 men in 100 or once every 20 years. Some years may be relatively static with few changes and in other years there may be many retirements with new recruits that must be integrated into the operating teams. In other cases, the organization of new companies means that new teams must be formed and some other members moved to provide a balanced force.

(*Continued on page 18*)

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What to Do About Transfers

(*Continued from page 17*)

It has been observed that there are seldom objections to transfers which are accompanied by promotions. The difficulty is that gaps made by promotion of experienced men often require transfers.

Most students of fire department administration agree that purely punitive transfers are undesirable and frequently detrimental to morale. The man transferred is resentful; the company to which he is sent is often resentful. The officer feels "Why ask me to straighten out someone else's headaches?" There are occasions where a fire company needs some new blood but this can be provided without implications of punishment. In fact, it is the implication of punishment or disfavor that has caused many fire fighters to resent transfer to new assignments.

Top officials in a certain large department were discussing impending transfers necessary to properly distribute the manpower. The chief said, "We'll just issue the order that men are to report to their new stations on the following tour of duty." His chief deputy said, "No. Give me 24 hours to personally talk to the men and I can make the necessary transfers as a personal favor to each of the men concerned." He knew that if consulted and considered as individuals many men would be quite willing and happy to accept new assignments but that they would resent being "railroaded."

Many departments have a policy whereby members may request transfers and these requests are honored when vacancies occur or where two members are willing to exchange assignments with the approval of the officers concerned with the efficiency of the companies.

Importance of the Battalion

It seems somewhat strange that where there are many temporary "details" from company to company to maintain required strength, that apparently little thought has been given to recognizing the fire battalion or district as an important unit in the minds of the members. A man belongs to the fire department; he is assigned to a company. The company belongs to the battalion or district. If the individual was a member of the battalion and then assigned to a company, most of the present problems over transfers might disappear. The battalion would be a large enough unit to maintain needed company strength without moving a man clear across town or out of the area with which he was most familiar. If certain members are getting an uneven share of the work, adjustments could be made in the assignments within the battalion to even up the work and give everyone an equal "break."

In a small department the chief at headquarters may know each individual, but in a large organization the individual fire fighter may be only a name or number. Giving district or battalion commanders more responsibility over the assignment of the fire fighters under their command might provide better organization, more efficiency and would give battalion commanders means for improving their organizations. From the point of view of the men, the limiting of ordinary transfers to within a district might remove many objections to the haphazard transfer policies which many fire departments seem to have inherited.

PREVIOUS TESTS 1902

At the Convention of the International Association of Fire Engineers, held in New York in September, 1902, the GLOBE Turn-Out Suit was tested by a solid 1½-inch stream forced at 180 pounds pressure.

Under any conditions the Suit DID NOT WET THROUGH!

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A woman drove me to drink, and I'll be a son-of-a-gun but I never even wrote to thank her. — W. C. Fields.

Chief L. H. Greer Retires

FIRE Chief L. H. Greer has retired after fifteen years' service as chief of the fire division in Dade County, Florida. He was appointed as chief in September, 1945.

The fire department in Dade County started in 1935 with only one truck in the Redlands District. Two years later two more fire districts in the county were started, each with one truck with one full-time driver. Chief Greer designed and supervised the construction of seven new pieces of apparatus and fog nozzles, and the same apparatus and equipment is still in service.

Last year, the fire division of Dade County reported a total of 4,020 fire calls, with 526 being for building fires, 2,407 grass fires, 15 grove fires and 1,072 other calls. At present there are ten fire stations in the county with thirteen pumpers, three chemical trucks, two 5,000 gallon tankers, a pick-up repair truck and fifteen sedans.

Chief Greer is a member of the International Association of Fire Chiefs, the Southeastern Association of Fire Chiefs, the Florida Firemen's Association and the Dade County Fire Officers' Association.

"CHIEF PRESTON! To what do we owe THIS honor?"

Fire Prevention Contest

ENTRY forms for all four divisions of the 1960 Fire Prevention Contest have been sent out to the 1,000 municipal and industrial fire departments who participated last year.

If your department isn't already planning to compete, send for a blank and start working on your entry now.

The contest pays a threefold dividend to entrants: It provides an opportunity for international recognition of excellent fire prevention activities. It materially helps to arouse interest in this subject throughout the community, the plant, military installation or non-military government facility. It is a definite stimulator of enthusiasm among the personnel of the fire department, fire brigade, or other organization sponsoring the contest entry.

Please specify contest division (municipal, industrial, military, or government) when requesting forms. Address: Public Relations Department at NFPA headquarters.

Nun Made Honorary Chief

IN RECOGNITION of her outstanding work in fire prevention, Sister Mary Roberta, administrator of the St. Elizabeth Hospital, Hutchinson, Kansas, recently was made honorary chief of the Hutchinson Fire Department. She was presented with a gold badge and card by Fire Chief Fred R. Dimond and Chief Fire Inspector M. C. Bond of Hutchinson. She is the first woman to be honored in this fashion by the Hutchinson Fire Department and is only the ninth person to receive the award.

In recent years, Sister Mary Roberta has appeared in a number of programs of fire service organizations to describe her hospital fire emergency plan which has operated so successfully. A description of the plan appeared in the December, 1954, issue of FIREMEN magazine.

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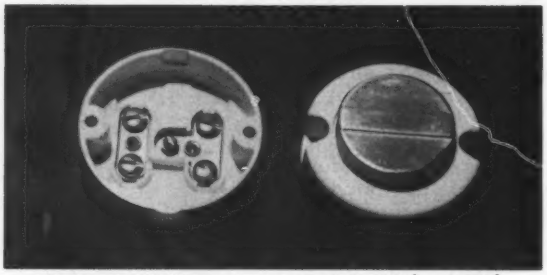

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What Is Your "Cover" Plan?

by Rexford Wilson
NFPA Fire Record Department

THE quiet little Northern U. S. community was disturbed occasionally by the staccato sound of rifle shots from the surrounding hills. It was the height of the deer hunting season. The weekend was drawing to a close as the sun sank lower on the Western horizon. The occupant of a second-story apartment suddenly lost his lethargy when he smelled smoke. Racing down stairs he found a small fire laboring hard to get a foothold in a corner of the basement. His first thought, *call the fire department.* The silence of the town was now shattered by another sound, the ominous wail of the fire siren. The volunteers would be responding to the call. A few minutes went by — two volunteers arrived at the station; neither one knew how to operate the mobile fire equipment of their department. The fire was bigger now but it still could be handled by prompt, vigorous attack with a booster hose line, but the hose line did not arrive. The fire became larger — men in the surrounding countryside heard the fire siren, picked up their rifles, struggled for their cars and headed back to town. Eventually, eight men arrived — some of whom knew how to operate the equipment and brought it to the scene, but the damage was already done. Over $300,000 was lost as the fire raced through a 2-story brick, wood-joisted tavern, bowling alley, post office and department store.

This case is not alone in the recent fire records; there are others of a similar nature. But the question arises, is your town *always* covered? You may say there are not many deer hunters in your department, but how about fishermen, or do you have a muster team, a parade crew? It is true that it is only the rare situation when a department is threatened of being stripped of its men. Are these situations being anticipated in your department?

Is, at least, a basic attack crew being left in town to operate the department during the time of need? If it is can you count on rapid, immediate mutual aid response, or are the mutual aid departments also stripped?

There are many systems for preventing this manpower problem. These range from the old peg-board check-out system to novel covering systems developed by thinking fire

(*Continued on page 22*)

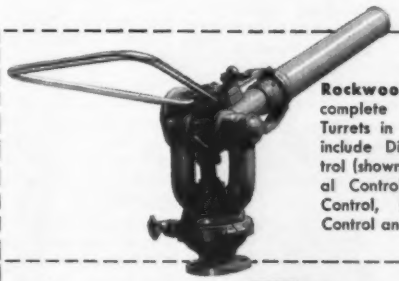
Stop Highway Fires!

The only way you can prevent highway fires from becoming major disasters in your community is to put them out as quickly as possible. Rockwood fire fighting products bring you that positive protection.

- **Using Rockwood nozzles or turrets, on fire trucks or on the ground, you can hit fires harder.**
- **Using Rockwood FOAM liquid, single or double strength, you can throw a quickly smothering blanket over fires in flammable fluids and other combustibles.**

Rockwood nozzles and turrets fight fires four ways: with solid water stream, solid FOAM stream, FogFOAM and WaterFOG. For over half a century, throughout the country, Rockwood's highly advanced fire fighting aids have been proving their ability to save lives and property. Make sure your own department has these dependable tools. For a large, illustrated booklet on this complete line, write to Rockwood Sprinkler Division, Portable Fire Protection Division, 424 Harlow Street, Worcester 5, Massachusetts.

SG-60 Nozzle with FF Extension. Like all Rockwood Nozzles and Turrets, this discharges straight water stream or WaterFOG, solid FOAM stream or FogFOAM.



Rockwood makes the most complete line of Specialty Turrets in the market. Types include Direct Manual Control (shown), Extended Manual Control, Remote Manual Control, Remote Hydraulic Control and Portable.

Rockwood Double Strength FOAM Liquid is mixed 3 parts with 97 parts water. This forms a blanket with proved ability to extinguish fires in flammable liquids with maximum speed and safety.

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What Is Your "Cover" Plan?

(*Continued from page 20*)

departments. The system doesn't matter, but the results do!

The following case should remind us that it is not always a special event which pulls the town's fire fighting manpower down. On a beautiful Sunday morning in a handsome Canadian community the men of the fire department were enjoying the summer camps most of them had built within 15 miles of town. A fire started and eventually caused close to $800,000 damage. The only means of notification was the local radio stations. By the time enough men began to arrive the fire was well under way and beyond hope of easy extinguishment.

What is your "cover" plan?

New Officers in Texas

NEW officers were elected at the annual State Firemen's and Fire Marshals' Association convention held in Galveston, Texas. The following have assumed office and will serve for one year: president, C. H. Boring, Jr., Rosenberg; first vice president, Vernon Rucker, Killeen; second vice president, W. E. Zorn, Del Rio; third vice president, Palmer West, Eldorado; fourth vice president, Norvall Terry, Weatherford; secretary-treasurer, David Clabaugh, Carthage; assistant secretary-treasurer, E. W. Pietsch, Seguin; and chaplain, Rev. Haskin Little, Houston.

Next year's convention will be held in Austin, the state capital, June 13–15.

Meetings

Nevada:

SEPTEMBER 25–28, 1961: 88th Conference, International Association of Fire Chiefs, Las Vegas. Watch future issues of this magazine for details.

New York:

OCTOBER 23: Monroe County Volunteer Firemen's Association, Inc., quarterly meeting, Grand View Heights Fire Department at 2:30 P.M. For details, write to Secretary Nathan C. Morrell, 241 Buckman Road, Rochester 15.

OCTOBER 26–28: Regional Fire Administrators' meeting, Elmira. Contact George H. Proper, Jr., acting director, Division of Fire Safety, Albany.

Pennsylvania:

NOVEMBER 3–5: International Rescue and First Aid Association, 13th annual convention, Benjamin Franklin Hotel, Philadelphia.

All funeral coaches must pull to the curb and stop when the siren sounds, altho the occupants are not required to seek shelter. — Federal Air Raid Manual.

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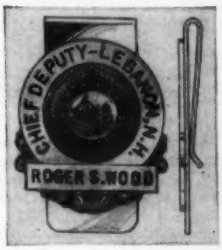

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Restoring Fire Company Morale

(*Continued from page 14*)

eliminate this source of friction. If the trouble is too deep-seated, it may be desirable to have men assigned to different work groups or even to recommend transfers to a different unit.

Another serious source of poor morale is where there has been serious laxity in carrying out the rules and regulations of the department which set forth what each member is supposed to do. Thus, some men may not be doing their fair share of the essential work while others are carrying too much of the load. For example, if men are permitted to come on duty under the influence of liquor, they are a source of danger to other men and cannot carry out their part of the job.

Much has been made of the importance of cleanliness of apparatus and equipment as a contribution to good fire company morale. However, it is usually true to assume that clean equipment is an indication of good management and morale because it may indicate some personal interest in the equipment and its effective use. It is doubtful if "spit and polish" for its own sake indicates good morale as the work may be done grudgingly and with a neglect of other important fire department activities. It is pretty well agreed that a clean station and clean apparatus is indicative of a good company and probably reflects some company spirit and pride.

Basically, the test of good morale is the individual fire fighter's attitude toward his department and his job. Good morale is seldom just a matter of official rules and regulations. Saint Paul well said that "laws are not made for the just but for lawbreakers." It is impossible to have a rule or law for every situation, and the effective officer runs things so smoothly that the rulebook is in the back of the desk drawer. Good morale is a product of good leadership which says, in effect, "Here we are, fellows. Let's get on with the job we have to do and let's try to enjoy doing it."

Fire Photo Exhibition

Chief O. Funk, who commands the fire department at the RCAF Station, Camp Borden, Ontario, Canada, reports the recent fire photo exhibition conducted by his department drew fine response from the public. The exhibition included photographs collected by R. D. Hedges of the RCAF Fire School, together with pictures loaned by fire departments, fire equipment manufacturers and government agencies of various countries. Shown above, children are being told about pictures of the Regiment de Sapeurs-Pompiers of Paris, France.

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Firemen's Training in the Months Ahead

Alabama: The Division of Trade and Industrial Education has prepared its First Annual Fire Inspection and Arson Investigation Conference for the fire and law enforcement services of that state. This year's conference will be held during the week of October 31–November 4. For detailed information, write to W. L. Rickard, assistant state supervisor, Trade and Industrial Education, Field Office, P.O. Box 2847, University.

British Columbia: The Fire Marshal's Traveling Instructional Unit will continue instructional classes throughout the Province. For details contact Fire Marshal Basil Nixon, 411 Dunsmuir St., Vancouver 3.

Indiana: A three-day Fire Inspectors' Course will be held October 25–27. For information contact Professor Shelby Gallien, director, Public Safety Institute, Purdue University, Lafayette.

Michigan: The Fourth Annual Michigan Industrial Fire Control Seminar will be held November 1–2 at the University of Michigan, Ann Arbor. For information, write Francis Hartman, supervisor, Firemanship Training Program, University of Michigan Extension Service, Ann Arbor.

New York: The 12th Annual Fire Instructors' Conference, sponsored by the Division of Fire Safety of the State of New York, will be held October 23–28, at Elmira. For further information, write George H. Proper, Jr., acting director, Division of Fire Safety, Albany.

North Carolina: The North Carolina Fire College and Pump School will be held October 17–19 at the Firemen's School Building and Training Grounds, 2601 East Seventh Street, Charlotte. Registration begins at 8:00 A.M., October 17. For detailed information, write Charles L. Burkett, director-conductor, N. C. Fire College & Pump School, Salisbury.

Sparky News

ANOTHER sparkling issue of *Sparky News* is off the press. Of special interest in this issue is an example of excellent adaptation of the Sparky symbol for practical use in industrial plants. The new feature, "Important Lessons in Fire Safety," this time emphasizes the need for family fire drills. The issue includes many ideas for Sparky Fire Department unit leaders as well as descriptions of Sparky activities at home and abroad.

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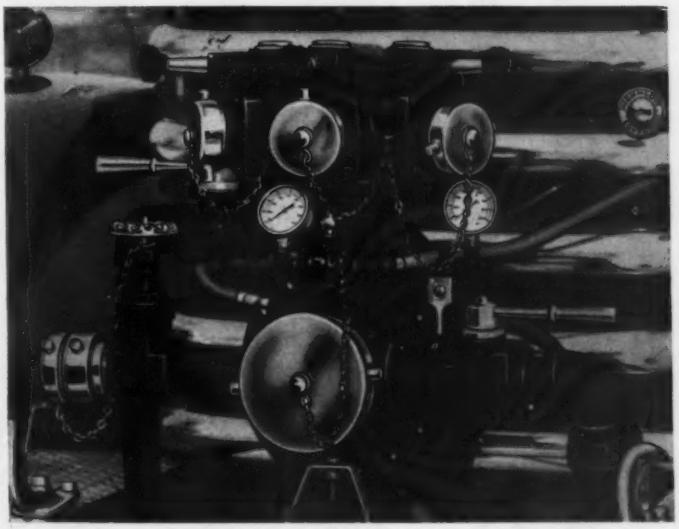

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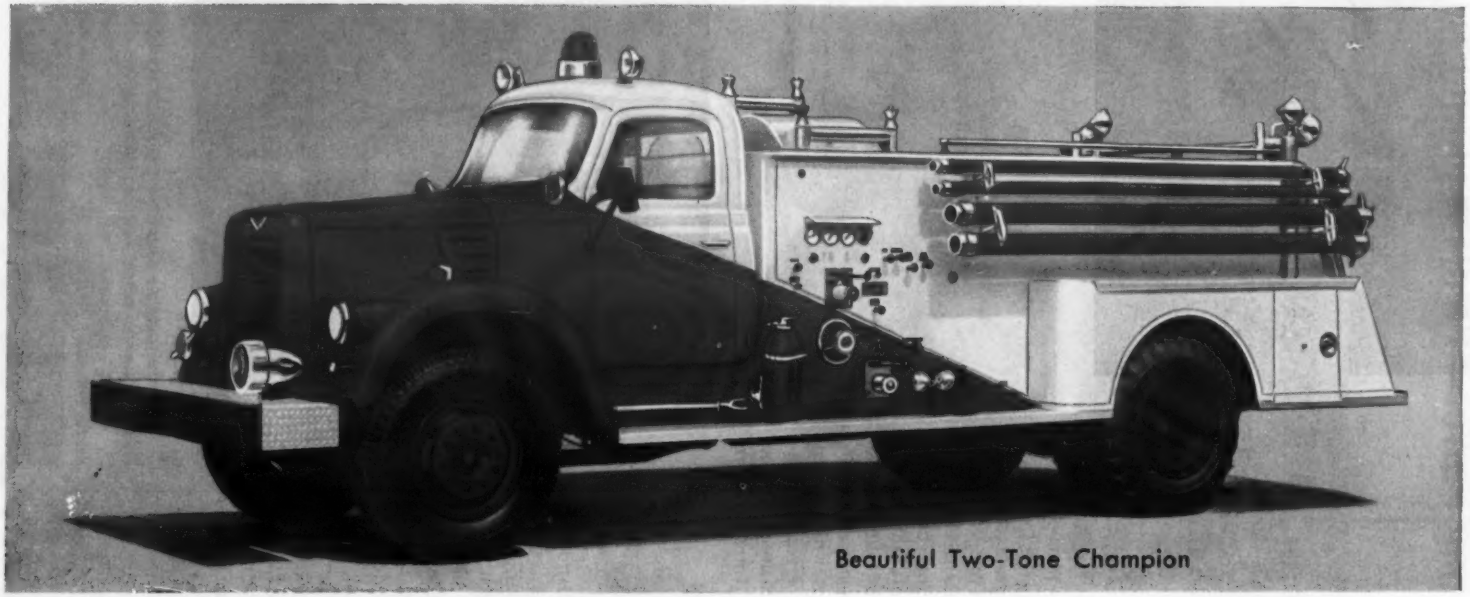
CRASH TRUCKS . . . TANKERS . . . with famous CHAMPION Pumps of 1-2-3-4 stages



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New Headquarters for Sarasota

SHOWN above is the attractive new headquarters building of the Sarasota, Florida, Fire Department. It has been in operation since January 7 of this year. The building features steel frame construction with a steel deck roof, cement block walls and jalousie windows. Three offices are in one wing and the dormitory is in another wing, with the dining and recreation areas in between, adjacent to the four-bay apparatus room. There are separate rooms for the watch desk, fire alarm headquarters, maintenance shop, photo laboratory, hose storage, and heating and air conditioning facilities.

The Department, headed by Chief James R. Cowsert, has 49 paid personnel manning 8 pumpers, an aerial ladder truck, two chief's cars and ambulance in four stations. All apparatus, except the truck, is radio-equipped.

Fire fighters carry all-service masks in a container on the bunker coats. The Department has a year-round in-service training program, following the Oklahoma "red books." In addition, each year fire officers are sent to Florida State Fire College for special training.

Department personnel work a 60-hour week, 24 hours on, 24 hours off, with a 5-day "Kelly" every two weeks.

Fire Administration Course

THE School of General Studies at Queens College, Flushing, New York, is beginning a new course in Fire Administration with the first class scheduled to begin on October 31. The twelve-week course will include instruction in the techniques of advanced fire administration, local government, municipal government, public planning and urban development, public relations, fire service emergency planning and seminars on fire prevention and municipal codes.

The course is part of the program sponsored by the Fire Administration Institute of the International Association of Fire Chiefs. A similar course started recently at the University of Southern California. Tuition costs will be $750 per man plus living expenses.

Inquiries should be sent to Dr. Glenn W. Howard, director of the Queens College School of General Studies, 65–30 Kissena Blvd., Flushing 67, New York. A folder describing the Institute, and registration forms are available on request.

More and more, emergency rescue service is recognized as an essential function of the fire department. Even if this important equipment is not yet part of your plans, it is forward thinking to be prepared with the facts on your own local requirements... to know what this additional life-saving equipment would cost... to know what items and features are most needed to perform an effective service in your community. Why not get the facts now? There is absolutely no obligation.

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this month's *News and New Products*

Pumper for Glen Burnie

The volunteer fire department in Glen Burnie, Maryland, recently received this 750 gpm Ward LaFrance pumper. It features a 300-horsepower engine, a 500-gallon water tank, a Rockwood Model B foam proportioner with a 30-gallon foam tank, an Eastman deluge nozzle, 5-speed overdrive transmission, a 100 amp Leece-Neville alternator system with 1,200 watt DC transformer and three outlets, a Westinghouse air-brake system and individual pressure gauges for each 2½-inch discharge outlet. Also included were a 35-foot aluminum extension ladder, a 14-foot aluminum roof ladder and a 10-foot aluminum folding ladder.

The Glen Burnie Fire Department has a roster of about 150 men, with 40 on the active list. It serves a commercial and residential area of two square miles.

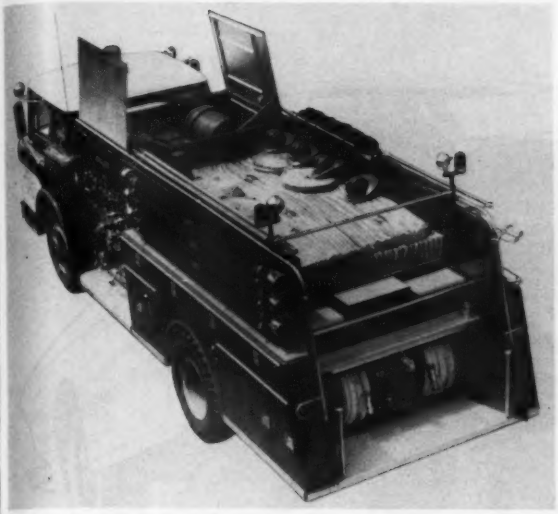
Super Vacuum Manufacturing Company, makers of "Super Vac" smoke ejectors, has moved into a new plant and offices at 1055 East First Street, Loveland, Colorado, just 50 miles north of Denver. New industrial products now in production include roof and attic ventilators, exhaust fans, portable industrial fans and doorway "fly wall" fans. . . . Fire department officials and first-aid squads are invited to the October 21st all-day open house at the new Miller-Meteor coach and ambulance plant in Piqua, Ohio. Miller-Meteor is a division of Divco-Wayne Corporation. . . . William B. Pashkow, formerly with Mack Trucks, Inc., is the new President of Ward LaFrance Truck Corporation, Elmira, New York. . . . Akron's new Spitz-All nozzle, with push-button release of any clogging action, was a big hit at the recent I.A.F.C. Convention in Rochester, New York.

Improved Rescue Suit

Field tests and extensive research have resulted in a new, improved Fire King aluminized fabric rescue suit made by Wheeler Protective Apparel, Inc., 228 West Huron Street, Chicago 10, Illinois. For details, write to the manufacturer.

New Pumper for Long Beach

Here's a new 1,250 gpm Mack pumper leaving the company's Allentown, Pa., plant for delivery to the fire department in Long Beach, California. Powered by a 276-horsepower engine, the truck features a six-man sedan cab and air brakes. Standing on the running board is Bert Nelson, Mack fire apparatus sales manager.



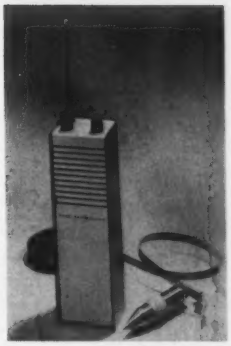
Pumper for Westerlo Volunteers

The Town of Westerlo Volunteer Fire Company, Inc., in New York, recently placed in service this new 750 gpm American La-France pumper. A unique feature is the large cabinet in the rear which has two C. B. Hannay electric rewind reels for 200 feet of preconnected 1½-inch hose. The truck also features 200 feet of 1-inch booster hose in twin reels behind the cab. The hose bed has a capacity for 1,600 feet of 2½-inch hose. Other equipment includes a portable pump, auxiliary generator, a Rockwood foam system and two-way radio.

The pumper is mounted on a Ford 950 chassis which is specially designed for duty in hilly country and rural areas.

Compact Hose Washer

Circul-Air Corporation, 575 East Milwaukee Avenue, Detroit 2, Michigan, announces its new, compact "A-Z" economy model hose washer. Built like the larger "Roto-Jet" automatic washer, the new model is manually operated and is priced to fit the budget of small- and medium-sized fire companies.



New Portable Radiophone

A new "Hand-D-Phone," smaller than a quart milk carton and weighing less than 2 pounds is being manufactured by Kaar Engineering Corporation, 2995 Middlefield Road, Palo Alto, California. It features simple one-hand operation and has a range of from ½ mile to several miles, depending on terrain. It has a large speaker for reception, an earphone jack for private listening and a squelch device for keeping the instrument silent until signals are received. The unit requires no FCC license, utilizes crystals meeting government specifications and is powered by a choice of four battery types with an operating life range of from 50 to 300 hours.

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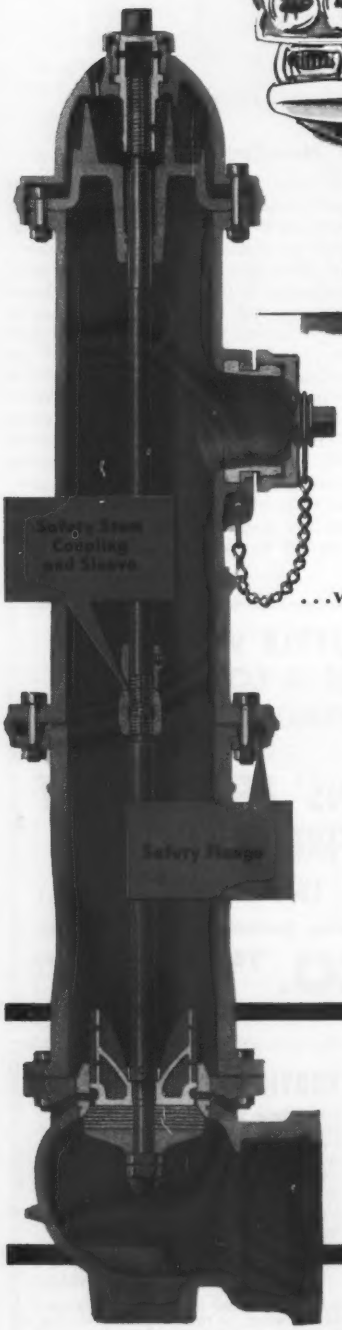

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Write for complete information and specifications.

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1146	2½"	Rigid Base	7¾	700	155
1147	2½"	Rigid Base	7¾	1000	155
1148-X	2½"	Rigid Base	9¾	2000	500

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Here's a brand new item to liven up your fire prevention displays. This SPARKY PATTERN-POSTER has been designed in response to numerous requests from fire departments, industry and individuals who are enthused about promoting fire prevention.

It can be used in many ways on hardboard or plywood for indoors or outdoors. For example, members of a fire company can cut out and paint the figure and place it in front of the entrance to the office, or at some other place in view of the public. Patterns can be given to vocational high school students so that figures can be cut out in the carpentry class. Grade school students can get good exercise in painting by coloring the Sparky figure correctly. Parents might want to let their youngsters get the same painting practice. Merchants can use a cutout for window displays during Fire Prevention Week and Spring Clean-Up.

Or, the same sheet can be used as an attractive poster, with the same color possibilities.

Order some pattern posters today. You will receive a complete instruction sheet that tells how to use and color this attractive new display piece.

Price: $1.35 each

DIMENSIONS

Sparky figure is 61 inches tall, 22½ inches wide. Pattern-poster sheet is 64 inches tall, 29¾ inches wide.

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